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Individual Firms and Regional Business Clusters: The HRM Advantage in Rent Generation

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Much of the literature on clusters has focused on the economic advantages of clusters and how these can be achieved in terms of competition, regional development and local spillovers. Some studies have focused at the level of the individual firm however human resource management (HRM) in individual clustered firms has received scant attention. This paper innovatively utilises the extended Resource Based View (RBV) of the firm as a framework to conceptualise the human resource processes of individual firms within a cluster. RBV is argued as a useful tool as it explains external rents outside a firm's boundaries. The paper concludes that HRM can assist in generating rents for firms and clusters more broadly when the function supports valuable inter-firm relationships important for realising inter-firm advantages.

Introduction

Drawing mainly from a macro-economic approach, cluster research to date has tended to focus on how policy makers can promote clusters or cluster-development to improve regional economic outcomes (OECD 2001; Newlands 2003; Pitelis, Sugden et al. 2006). This paper extends existing cluster research by drawing the level of analysis to the individual firm. It examines an aspect that is under-reported in cluster research relating to value creation for individual firms and how HRM practices may assist to optimise the value created from firm membership of a cluster. By examining clusters at the firm level, valuable insights are provided into how firms can be organised internally and externally to exploit the advantages offered by clusters while optimising the benefits for clusters overall.

Clusters, Extended RBV and Human Resource Management

Wide academic and practitioner interest in establishing the benefits of co-location has resulted in diverse perspectives of clusters over recent years (Newlands 2003). A review of the literature clearly indicates that there is yet to emerge a single well-accepted definition of clusters, though Porter's (2000) definition, which is used for this study, has been the most widely used:

Geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries and associated institutions (e.g. universities) in particular fields that compete but also co-operate (Porter 2000, 15).

Critics such as (Martin and Sunley 2003, 14), suggest literature to date has not produced essential criteria for defining clusters. There is a clear lack of consensus on whether boundaries are stipulated by geographical reach, inter-firm linkages or information networks. As a result of the vague definition of boundaries, the term cluster has been arbitrarily used resulting in diverse research which complicates effectively systemising studies to date. However, analysis of the literature reveals that clusters have been examined through different lenses in the search to understand the benefits of regional co-location for firms. The main research associated with cluster analysis pertains to competitiveness, regional development and local spillovers (Maskell and Kebir 2006, 34-37).

Clusters affect competition in three different ways through (1) increases in the current productivity of firms or industries; (2) increases in the cluster member's capacity for innovation and productivity growth and (3) fostering innovation within a region through stimulating entrepreneurship and expanding the size of the cluster. A well developed cluster

provides valuable advantages to productivity and capacity to innovate that is difficult to attain externally (Porter 1998).

From a regional development perspective research suggests that clusters can be a catalyst for regional growth (Hospers and Beugelsdijk 2002). Current literature on the benefits of clusters from a regional development point of view unearths three main areas (Enright and Roberts 2001; Eraydin 2002; Scott and Garofoli 2007). Firstly, clusters offer external economies of scale and scope. The co-location of many different providers of goods and services enables efficiency and flexibility for many firms due to their close proximity. Secondly, innovation and learning are argued to be intensified in regions as co-location provides increased opportunities for face-to-face communication, a criterion often ascribed to the innovation process (Malmberg and Maskell 2002; Bathelt, Malmberg et al. 2004). Thirdly, labour markets feature predominately in the literature. It is suggested that dense local labour markets or labour pooling afford firms agglomeration economies (Enright and Roberts 2001). Due to the localisation of many skilled employees in one place, search costs are reduced and job matching activities are enhanced. It is also argued to facilitate the emergence of joint training efforts (Scott and Garofoli 2007, 10).

A third aspect of clusters that has been widely explored in the literature is the notion of knowledge spillovers (Audretsch and Feldman 1996; Breschi and Lissoni 2001; Phene and Tallman 2002; Fosfuri and Rønde 2004). Knowledge spillovers have grown in importance as the knowledge economy emerged over the past several decades (Acs, De Groot et al. 2002; Powell and Snellman 2004; Tödtling, Lehner et al. 2006). In this environment spillovers are beneficial to firms to gain competitive advantage as they provide access to valuable information outside a firm's boundaries. Empirical evidence suggests that productivity increases due to spillovers and that the benefits achieved through spillovers decrease with geographic distance (Almeida and Kogut 1999; Acs, De Groot et al. 2002). Spillovers can result from voluntary exchanges of information, informal talks, mobility of workers and even industrial espionage (Fosfuri and Rønde 2004). A number of studies have analysed the role of labour mobility in knowledge spillovers (Almeida and Kogut 1999; Lawson and Lorenz 1999; Power and Lundmark 2003; Bathelt, Malmberg et al. 2004). Because labour mobility acts as a pipeline for the transfer of knowledge, higher rates of labour movement may encourage knowledge diffusion and creation (Power and Lundmark 2003). Knowledge is embedded in regional labour networks and the transfer of knowledge is directly related to labour mobility. It is evident from the discussion on knowledge spillovers within clusters that human resources have a role to play in aiding the location advantages of firms. The highlighted importance of people clearly aligns with the RBV's premise that human resources are strategically important for firms and therefore should be organised in such a way that delivers competitive advantage. By examining the internal strengths of a firm using the RBV a greater understanding of how individual firms can advantageously utilise their human resources through co-location will be achieved.

Barney's (1991) watershed research provided the first concrete and comprehensive framework of the RBV (Hoskisson, Hitt et al. 1999). Barney (1991) specified the resource characteristics necessary for sustainable competitive advantage within the firm. In order for competitive advantage to be achieved, a resource must fulfil four attributes: (a) it must be valuable; (b) rare among the competing firms; (c) hard to imitate and (d) hard to substitute (Barney 1991). The premise of the RBV is that a single firm possesses a bundle of intangible and tangible resources and by virtue of these heterogeneous resources, can attain a unique character which affords them competitive advantage.

Despite the merits of the RBV, there are limitations in its applicability. With the increased importance of inter-firm networks and alliances, Lavie (2006) notably argues that the gap between theories of the firm and the literature on alliances presents deficiencies in examining competitive advantage in networked environments. In particular the RBV of the firm alone is insufficient for explaining how competitive advantage is achieved in networked environments where firms have inter-firm collaborative relationships as its focus is on resources within a firm and for firms to protect core resources. In response to these deficiencies of the traditional RBV a relational view was proposed by Dyer and Singh (1998) that suggests that firms can benefit from sharing valuable know-how in return for access to competitor know-how. As a result firms should be willing to accept a certain level of knowledge spillovers in order to create inter-organisational rent-generating processes (Dyer and Singh 1998).

The RBV focuses on internal rents; however, when considering an interconnected firm, Lavie (2006) suggests that the contribution of intra-firm resource complementarities also needs to be considered. An extended RBV for inter-connected firms calls for less reliance on traditional RBV assumptions, such as protecting core resources from competitors, and more on relational capability. The importance for inter-connected firms to internally organise their resources in such a way as to exploit their competitive advantage is still relevant, however, firms also need to configure alliance network activities (Lavie 2006). The extended RBV does not discount that alliances often exist in highly competitive environments, and that clusters are often a mixture of both competition and co-operation (Newlands 2003). Nonetheless, firms that exist in a highly networked environment can still draw upon an extended RBV that includes a relational view in order to understand how to achieve inter-firm competitive advantages.

Clusters and their implications for HRM have not been widely considered. While there has been limited attention to the study of HRM in clusters, there are; however, studies that examine HRM within networks. These studies suggest that the exercise of strategic human resource decisions is influenced by the characteristics of the networks within which the firm operates and that both the role of HRM and its consideration needs to be extended in order to incorporate the role of networks and inter-organisational relationships (Ritter 1999; Anderson and Boocock 2002; Lengnick-Hall and Lengnick-Hall 2003; Bacon and Hoque 2005; Kinnie, Swart et al. 2005). The belief that HRM decisions play a significant role in a firm's viability underpins Strategic HRM (SHRM) and the need to align HRM practices to support business objectives. Integrating HRM functions, supporting organisational goals and being responsive to the external environment are some of the main themes of SHRM (Nankervis, Compton et al. 2005). This research incorporates existing RBV, including the extended RBV and SHRM literature, to explore:

How the RBV contributes to understanding the human resource processes of **individual firms** within a cluster;

How the HRM practices of **individual firms** assist it in generating value from the firm's participation in a cluster.

Background

The case study selected was the ship building industry section of the maritime cluster located in Schleswig-Holstein, in the far north of Germany. The rationale for selecting this cluster is its large number of knowledge intensive firms, a feature pertinent to the knowledge economy. Furthermore, the cluster's boundaries are clearly defined due to its purposeful formation by government and industry. The cluster has been in operation for over two years and is overseen by a government assisted organisation that aims to promote cooperation and innovation, support communication between firms through networking events, and create regional

awareness and identity. The cluster is largely government funded with 70% of financial support from the government and 30% from the private sector and involves approximately 1700 firms including research institutions with around 60 firms actively involved in the cluster. The six firms selected for this research are part of this core group of 60 firms.

Method

The research was conducted on a cross-sectional basis over a period of seven weeks and commenced with interviews with two managers of the cluster organisation that oversees the region. Subsequently face-to-face interviews were held with five firms, the participants involving a HR manager and a key person involved in the cluster, usually the General Manager. All interviews were conducted on a semi-structured basis guided by an interview schedule (Maykut and Morehouse 1994).

The initial interview with cluster management sought to obtain general information about the cluster and glean from the managers' perspectives some of the managerial issues that face clustered firms. This interview enabled a snow-ball sampling strategy to take effect with the managers then providing contact details for other potential participants to take part in the study. The subsequent further six interviews (involving 11 participants) included interviews with small, medium and large sized firms.

Findings

The interviews sought to uncover the human resource implications for firms within a cluster and whether or not their HRM policies were designed to capture inter-organisational rents. Three main requirements for successful networking and collaboration were particularly noted by the participants. These were trust; the need for employees to possess the right mental attitude towards networking, and the possession of good communication and personal skills. These findings clearly highlight that successful networking and collaboration lies in the networking abilities of a firm's employees. As clusters are characterised by inter-firm relationships, it is essentially the employees that develop and facilitate this process of knowledge sharing. The interviews revealed HR practices both supportive and counter-productive towards developing the aforementioned antecedents.

Training and Development

While some respondents did not perceive a need for training and development in networking and collaboration specific for the purposes of the cluster most participants mentioned the use of formal or informal programs to develop personal and networking skills. Some of these programs were designed with the cluster in mind and others already existed in the firm. The interviews found that most firms tended to use primarily informal training:

We do a lot of soft skills training, by soft skills I mean conflict resolutions, negotiation, group management. These are things we need in networking of course but I don't think we need specific training in the area. It is more that you direct people and they appreciate the efforts you take. It makes a difference on how you send people to events, to discussions, whether you say, go there and enjoy the evening, or whether you say take your time to think about what you can do with them (Interview 2).

This illustrates the network advantages as proposed by the extended RBV theory and demonstrates that the participant sought to gain this advantage by being involved in the cluster. It is evident that there are proactive efforts by management in order to capitalise on networking events. Management employ a form of informal mentoring in which employees involved in the cluster do not undergo any formal training but are mentored by management as to 'what is expected of them at cluster events... it is not fun time or a time to relax'

(Interview 2). This form of training and development is an example of extending the firm's internal HR practices into the cluster and can also be seen as supporting the relational capacity among firms which leads to network advantages.

Job Design, Rewards and Incentives

The interviews revealed that while some firms did not perceive any cluster impacts on an employee's job design, others noted that cluster activities increased the workload of staff. However, there were differences as to whether or not the increase in workload was matched with an increase in the scope of an employee's job design and rewards. The size of the firm impacted on whether or not the participants mentioned an increase in the workload of employees. In the case of the smaller firms in which only the top levels of management were involved in the cluster, there was no perceived impact of the cluster on job design. This was also the case for rewards and incentives and is attributed to the fact that in the smaller firms, cluster activities were primarily the responsibility of top management.

In firms where cluster activities did involve employees at the lower levels of the organisation, the participants noted increases in employees' workloads due to the cluster and the added responsibility of networking. One managerial participant cited an increase in 'organisational workload' was a disadvantage of the cluster and a Managing Director reflected the same sentiment: 'From a workload point of view nobody is interested in doing it; very simply, it is an extra load that does not put immediate rewards on the table'.

The research found that only one firm accounted for the additional workload when designing their employees' jobs or rewards. This participant highlighted that given some employees were more involved in cluster activities than others it required changes to their job design and rewards: 'This is another important thing, when the work goes up, also the work description goes up and the money goes up. Why do they learn and train in all these things in the end? They want to get a profession not a job. They want to get good money'. This proactive attitude was further demonstrated by their practice of including their high-performing employees in cluster activities. It was considered that giving key employees this added responsibility demonstrated their value to the company and was considered a reward.

Quasi-internal Labour Markets

Skill shortages were identified as a major problem facing most firms within the Maritime Cluster. Most participants expressed their concern in regard to filling positions, in particular, engineering positions. The need to address the lack of skilled labour in the region caused many firms to strategically target recruitment activities towards universities and schools and that the recruitment strategies of most firms were largely focused on trainee/apprentice levels:

This is a good way for both sides only sometimes do we recruit engineers from the market. It is very easy to explain: In the market they are rare, there are only a few engineers and these engineers are expensive (Interview 1).

In view of the labour shortages, the interviews revealed the creation of an internal labour market within the cluster. One key firm within the cluster highlighted that sharing information on pay levels and HRM issues was highly beneficial. In this particular case, Directors of the HRM departments within member firms met every six months to share information and discuss HR related issues:

You see there are different pay levels in East Germany and North Germany and just in the last month we have had to find a new structure in our payments. This is a very complicated point to work and therefore we need help and ideas and the open word of the other companies. This is a very big and great advantage (Interview 1).

The opportunity to discuss the new pay structures within 'experienced' circles was identified as a significant advantage. The respondent also noted that because the unions associated with the shipyards met regularly and talked with an 'open word and open books', there was also a need for the HR managers of these firms to also collaborate and share ideas. This collaboration between HR managers was found to also include suppliers and other firms along the supply chain, not only the ship building firms themselves.

Shortages of skilled labour still led to the poaching of staff within the cluster, however, opinions on its appropriateness varied among respondents. Some felt that poaching undermined trust within the cluster while others believed that the poaching of staff was a natural part of the cluster and was an acceptable and normal means of recruitment. Being able to acquire a competitor's employee was seen as an advantage of being located in a cluster:

And when our people know other people on other shipyards or in other businesses like an engine company or any supply industry, where they have good engineers, we phone them and ask them whether or not they would like to work with us. This is the third way and that is the more dirty way! (Interview 5).

According to Oakey (2007) this highly competitive act, although potentially effective in the short run, can lead to wage inflation in the cluster. It is evident that some firms within the cluster were seeking to avoid this through the HR alliance discussed earlier. By openly discussing pay structures among firms they are pattern bargaining to reduce wage differentials within the cluster, avoid wages 'blowouts' and reduce staff turnover. This concurs with the findings of Smith, Daskalaki, Elger and Brown (2004) who found that a group of Japanese firms used common wage standards and information exchange on human resource management as a means to reduce labour turnover.

Analysis

The findings indicate a role for HRM in building the relational and structural dimensions within the firm to appropriate value from the cluster. Relational dimensions pertain to the HR function of training and development while the structural dimensions pertain to job design and rewards. The development of a quasi-internal labour market also has implications for HR practice.

Relational Dimensions – Training and Development

Training and development has been a traditional role for HR; however it generally focuses on internal relationships that are found in organisational charts, job design and policies and procedures (Lengnick-Hall and Lengnick-Hall 2003). From the case presented here it is evident that competitive advantage is also found in external inter-firm relationships, yet firms' HR is not always actively involved in developing the skills required to develop and sustain these relationships.

Training and counselling activities that are designed to build trust, change mental attitudes and develop communication skills may enhance personal relationship capabilities needed for reaping the relational rents and network advantages (Lengnick-Hall and Lengnick-Hall 2003). One firm demonstrated this proactive approach by providing relational development programs for key employees involved in network activities. The benefits of this strategy can be explained by Ritter's (1999) definition of network competence which examined how firms are able to build and use networks of relationships that afford them competitive advantages. One of the requirements is a network orientation towards human resource practices. Therefore, if firms were to reflect a network orientation in their training and development programs, employees would be better equipped to participate in the network. In view of the extended

RBV and relational rents, some firm's practices support relational capacity through training and development but this is not consistently applied.

Structural Dimensions – Job Design and Rewards

Work design directly affects the structural dimension of social capital as it determines the frequency of interactions and establishes information flow among jobs (Cabrera and Cabrera 2005, 724). The design of a job organises the activities of an employee in relationship to the work processes of the organisation, the activities of others in the organisation and external stakeholders (Fiol and Mohrman 2003, 95). By acknowledging networking as part of an employee's job design HR can encourage employees to view social events as invaluable sources of relationship building. The findings of this research indicate that with the exception of one firm, most participants did not change the job design for employees involved in the cluster. This concurs with Ritter's (1999) finding that in many cases network management is done as a 'minor part-time job' and undermines the importance of networks leading to a low degree of network competence. Firms can cultivate valuable knowledge flows by designing work that encourages mobility and interaction of people across firm boundaries. It is arguable that if building external relationships becomes part of an employee's job description, the mental barriers towards networking may be alleviated. Furthermore, if this is combined with appropriate incentive structures that reward efforts toward building inter-firm relationships, this research suggests that firms may be better equipped to reap the advantages tied to networks. The finding that only some firms include cluster activities in their job design may explain employee resentment toward the cluster. Therefore, from the extended RBV perspective if firms legitimise this process through job design this may encourage their staff to participate in value adding inter-firm relationships.

Ritter (1999) notes that in order to improve a firm's network competence HR has a responsibility to ensure that firms provide staff with sufficient rewards for engaging in cluster or network activities. Therefore, in addition to job design, appropriate incentives and rewards may assist in legitimising the process of networking for employees and assist in developing the relational capacity necessary for gaining advantages from the network.

Quasi-internal labour market

The findings revealed the creation of a quasi-internal labour market within the cluster. This is manifest in the HR alliance, the widespread practice of sourcing labour from local universities and the use of pattern bargaining among firms. The majority of firms recruited from local institutions due to the scarcity and cost of more experienced staff. They noted that close collaboration with the local universities was essential for meeting employment needs. In addition, the findings indicate a combination of both collaboration and competition for staff within this quasi-internal labour market where firms collaborate on reward information to avoid staff turnover, yet poach valuable staff from one another suggesting a layered labour market where scarcer knowledge resources fall outside the boundaries of collaboration. This supports the extended RBV's premise that relational rents span a firm's boundaries and that there are advantages to be gained in inter-firm networks and collaboration. In order to reap these network advantages firms are willing to collaborate on sensitive issues such as pay in effect contradicting the traditional RBV's argument to protect core resources and knowledge.

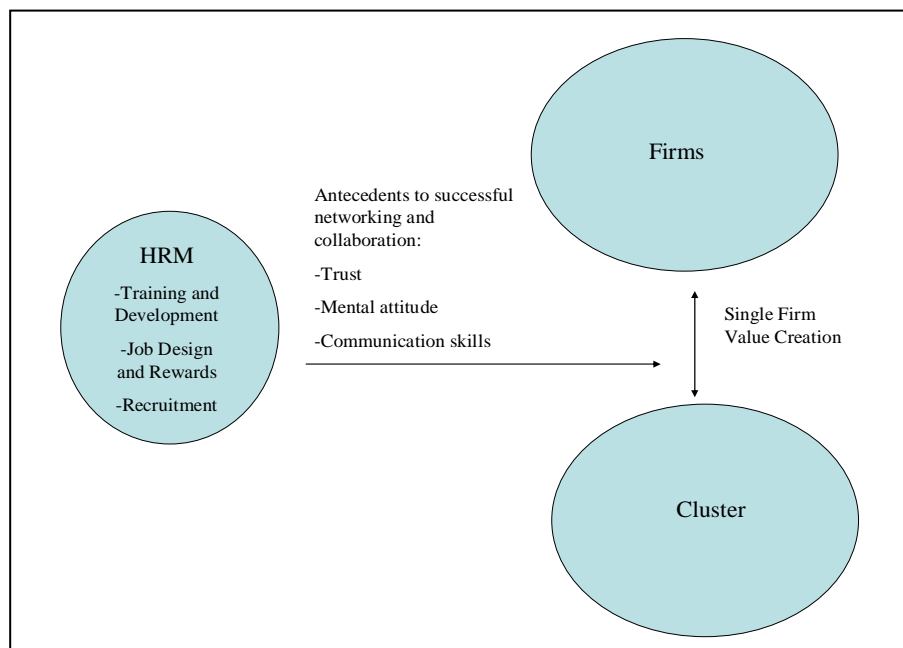
The HR alliance illustrates how firms have strategically pursued unconventional HRM practices in order to reap advantages that otherwise would not be available outside of collaboration. Although, close relationships with local institutions is extremely beneficial for the clustered firms, it is important to note that recruiting primarily from the internal-labour market may stifle new knowledge entering the industry (Inkpen and Tsang 2005,157).

Establishing and maintaining external contacts outside the cluster boundaries is important in obtaining new ideas. Pouder and St John (1996), note that this is particularly important when managers within the region become more homogenous in their mental models over time.

Conclusion

The paper has demonstrated that the extended RBV is a useful platform in which to examine the firm benefits when they are actively involved in the maritime cluster. In view of the advantages it is evident that they are embedded in the relationships between firms, therefore, there is a need for different firm-level strategies as opposed to the normative strategies proposed by the traditional RBV. Reliance on other network actors as sources of information and cooperative partners requires expertise and competence if these relationships are to be successfully maintained (Ritter 1999). This suggests that network competence within firms can be developed through HR practices such as training and development in order to build the relational capacity needed for such activities. Further, HR practices are able to support and reinforce value adding relationships by acknowledging and rewarding employee effort toward cluster activities. The findings of this research suggest, however, that firms were not widely adopting HR practices to support networking activities, yet these same firms acknowledged the benefits of skills and activities that have been shown to be supported by HRM. Based on the extended RBVs premise that competitive advantage is embedded in inter-firm relationships, this research suggests a need to change traditional HRM practices in order to support this new source of rent. The following diagram depicts how this may be achieved.

Figure 1: HRM and Inter-firm Advantages



Miles and Snow (1995) argue that organisational forms and managerial philosophies evolve together. Further that when strategies and structures are implemented without supporting HRM philosophies, failures usually occur. It is evident that some firms actively involved in the maritime cluster display unconventional managerial philosophies in their quest to share and gain valuable knowledge from the network. Therefore, as suggested by Miles and Snow (1995) this must also be accompanied with supporting HRM management philosophies. Because one of the key advantages of cluster membership is the sharing of information, cultivating inter-firm relationships is vital for this process as they affect knowledge transfer.

For firms to maximise the benefits of cluster membership, HRM can support and develop the relational capabilities such as trust, mental attitude and communication skills needed for inter-firm relationships. Furthermore, HRM can leverage their position as internal architects by designing jobs that accommodate for the added responsibility of networking and by rewarding such behaviours. This research has demonstrated that through an understanding of the relational view, and the recognition that rents exist outside a firm's boundaries, the extended RBV can be used as a platform for examining how firms can be organised both internally and externally in order to capitalise on inter-organisational competitive advantages. By conceptualising a role for HRM within firms operating in a cluster it is suggested that there are benefits for firms and the cluster as a whole when HR supports valuable inter-firm relationships through network supporting HR practices. However, the full advantages of this have not been realised.

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